IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of	Examiner: Patricia C. Mallari
PHILIP R. WESTBROOK ET AL.	Group Art Unit: 3736
Patent No.: 6,811,538 B2	Client ID/Matter No: ABMON 64568
Issued: November 2, 2004	
Serial No: 10/040,937	
Filed: December 28, 2001	January 21, 2005
	Los Angeles, California 90045
For: SLEEP APNEA RISK EVALUATION	

REQUEST FOR CERTIFICATE OF CORRECTION

Certificate of Correction Department
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The above-identified patent has been found to have the errors set forth in the enclosed Certificate of Correction. It is requested that this Certificate of Correction be issued and returned to us. Since these errors occurred in both the final printing phase of the patent and in the final application, a check in the amount of $100.00 is enclosed to cover the necessary fees. Should the Office determine that additional fees are needed, please charge Deposit Account No. 06-2425.

The errors are verifiable in the patent application file as follows:

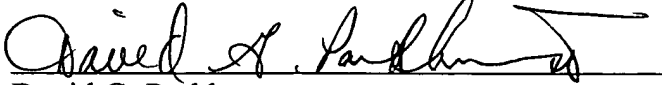| **ERROR**	**APPLICATION FILE**
Column 10, line 41, delete "ate" and insert --rate--.	Applicant error.
Column 17, line 4, after "$(N_{max}-N_{min})/$" insert --(--.	Patent Application filed on December 28, 2001. See Attachment A.
Column 18, line 48, delete "s ".	Applicant error.
Column 26, line 15, delete "reference" and insert --referenced--.	Applicant error.
Column 27, line 25, delete "of the patient".	Applicant error.
Column 28, line 31, delete "oxyhemoalobin" and insert --oxyhemoglobin--.	Amendment dated May 14, 2004. See Attachment B.
Column 28, line 63, delete "of the patient".	Applicant error.
Column 30, line 7, delete "of the patient".	Applicant error.

These errors occurred in good faith and correction thereof does not involve such changes in the patent as would constitute new matter or would require re-examination. It is requested that a Certificate of Correction be issued and returned to us.

Attached hereto, in duplicate, is Form PTO-1050, with at least one copy being suitable for printing.

A duplicate of this document is attached.

Respectfully submitted,

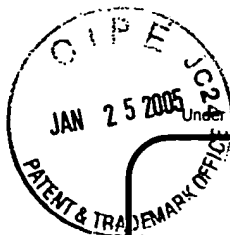FULWIDER PATTON LEE & UTECHT, LLP

By: _David G. Parkhurst_

David G. Parkhurst
Registration No. 29,422

DGP:ck
Enclosures

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
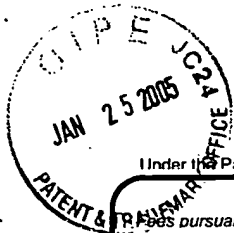Facsimile: (310) 824-9696

Customer No. 24201

77461.1

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/040,937
Filing Date	December 28, 2001
First Named Inventor	Philip R. Westbrook
Art Unit	3736
Examiner Name	Patricia C. Mallari

Total Number of Pages in This Submission		
Attorney Docket Number	ABMON 64568	

ENCLOSURES   *(check all that apply)*

☒ Fee Transmittal Form

☒ Fee Attached

☐ Amendment / Reply

  ☐ After Final

  ☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☐ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/ Incomplete Application

  ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

☐ Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert a Provisional Application

☐ Power of Attorney, Revocation Change of Correspondence Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s) _____

Remarks

☐ After Allowance communication to Technology Center (TC)

☐ Appeal Communication to Board of Appeals and Interferences

☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**

☐ Proprietary Information

☐ Status Letter

☒ Other Enclosure(s) *(please identify below)*:

**Return Postcard
Req. for Certificate of Correction
Certifcate of Correction**

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	FULWIDER PATTON LEE & UTECHT, LLP Customer No. 24,201
Signature	*[signature]*
Date	January 21, 2005

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria,VA 22313-1450 on the

Typed or printed name	David G. Parkhurst		
Signature	*[signature]*	Date	January 21, 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	100.00

Complete if Known

Application Number	10/040,937
Filing Date	December 28, 2001
First Named Inventor	Philip R. Westbrook
Examiner Name	Patricia C. Mallari
Art Unit	3736
Attorney Docket No.	ABMON 64568

METHOD OF PAYMENT (check all that apply)

☑ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account   Deposit Account Number: 06-2425   Deposit Account Name: Fulwider Patton ...

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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☐ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	Small Entity Fee ($)	SEARCH FEES Fee ($)	Small Entity Fee ($)	EXAMINATION FEES Fee ($)	Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)	Multiple Dependent Claims Fee ($)	Fee Paid ($)
_____ - 20 or HP =	_____ x	_____ =	_____	_____	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP =	_____ x	_____ =	_____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round up to a whole number) x	_____ =	_____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	_____
Other (e.g., late filing surcharge): Req. for Certificate of Correction	100.00

SUBMITTED BY

Signature	[signature]	Registration No. (Attorney/Agent) 29,422	Telephone 310-824-5555
Name (Print/Type)	David G. Parkhurst		Date January 21, 2005

The diode current consists of a component proportional to reflected light I_s and "dark" current I_d that depends on temperature and diode construction. From basic electrical laws, turning to Fig. 13, the values obtained after A/D conversion N are proportional to the relationship: $N \sim G*(I_s+I_d - I_0)$. The value needed for the reflected light inducing circuit is:

5    $I_s \sim N/G + I_0 - I_d$, where G is amplifier transconductance [G]. During the adjustment phase, the values I_0 and G are set by digital potentiometers (multiplying D/A converters) so that the amplifier output signal is set within the A/D converter dynamic range with sufficient AC amplitude. Both values (G and I_0) can be adjusted during operation, when required.

For each sample that is acquired, three measurements are performed: one with the red

10   LED on, one with the infrared LED on, and one with both LEDs off. The result of the third measurement is subtracted from the previous two, because it contains all offsets (amplifier and A/D converters) and ambient light influence. Taking into account that, for the SpO_2 calculation, a ratio of AC to DC component of light signal is required, the ratio for both light components, red and infrared, can be obtained. Min and max indexes correspond to values

15   on minimum and maximum blood pressure, respectively, during heart activity period.

$$R_l = AC/DC = (I_{smax} - I_{smin})/ ((I_{smax} + I_{smin})/2) = (N_{max} - N_{min})/((N_{max} + N_{min})/2 + N_0)$$

The constant $N_0 = G*(I_0 - I_d)$ can be determined by calculation using circuit component values or obtained by calibrating each device.

C.   Smoothing of the calculated SpO_2 values

20   The SpO_2 values calculated from red and infrared signals should be smoothed in order to reduce the effects of noise and increase the detection of desaturation events. In the

providing the stored pulse oximetry data signals to an expert system that receives

the stored pulse oximetry data signals, wherein the expert system performs an analysis

and generates a sleep apnea risk evaluation report of the patient, the expert system

receiving the pulse oximetry data signals and utilizing a database to perform an analysis

and generate the evaluation report of the patient; and

providing said pulse oximetry data signals to computing circuitry that responds to

the received pulse oximetry data signals by identifying a respiratory event of the patient,

wherein the computing circuitry identifies said respiratory event in response to detecting

pulse oximetry data signals that indicate a threshold level of oxyhemoglobin desaturation;

A method as defined in claim 56, wherein the threshold level of oxyhemoglobin

desaturation is variable, and the variable threshold level is based on at least one of the

following criteria: peak oxyhemoglobin saturation, nadir, and peak oxyhemoglobin

resaturation.

Claim 61 (Currently amended) A method of evaluating risk of sleep apnea in a

patient, the method comprising:

attaching a physiological monitoring system to a patient's forehead, wherein the

physiological monitoring system includes (a) a pulse oximetry sensor and circuitry that

detects oxyhemoglobin saturation and pulse rate of the patient and produces

corresponding pulse oximetry data signals, and (b) a storage memory that stores the pulse

oximetry data signals produced by said pulse oximetry sensor, thereby eliminating all

lead wires between the patient and the storage memory;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,811,538 B2

DATED : November 2, 2004

INVENTOR(S) : Philip R. Westbrook et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 10,
Line 41, delete "ate" and insert --rate--.

Column 17,
Line 4, after "$(N_{max}-N_{min})/$" insert --(--.

Column 18,
Line 48, delete "s ".

Column 26,
Line 15, delete "reference" and insert --referenced--.

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Line 25, delete "of the patient".

Column 28,
Line 31, delete "oxyhemoalobin" and insert --oxyhemoglobin--.
Line 63, delete "of the patient".

Column 30,
Line 7, delete "of the patient".

MAILING ADDRESS OF SENDER:
David G. Parkurst
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6060 Center Drive, 10th Floor
Los Angeles, CA 90045

PATENT NO. 6,811,538 B2

No. of additional copies

Page 1 of 1

TO: _____●_____ **On (note date):** ⊢1 FEB 2005 **Pat. No.** 6811538

INFO SUPPLIED BY: _____   10/040937

Team Leaders Initials

OAC/LDRC Initials

SECOND REQUEST (DIFFERENT CORRECITONS), SUPERSEDE OR RECONSIDERATION
(OAC OR LDRC, USE A RED PEN FOR COMPLETING INFO, ON THIS COVER SHEET) (11/2002 cbn)

Team Leader, an Office Automation Clerk may assist you by supplying data from CofC Database (Current & History), PALM, and copies from Intranet, to determine type of request (second request, supersede, and/or reconsideration) and to determine if there were any errors made in decisions and/or publishing are attributable. **Team Leader, check appropriate boxes below, key record (if necessary) and forward to JCWS, to order file and assign file to an LIE, to EXPEDITE.**

Team Leader, DO NOT ORDER FILE.

↓ **MRD** (for request attached to this cover sheet): _____/_____/_____ (Team Leader have LDRC, stamp same MRD on 1050s.)

S **File Charged to** (in PALM): _____ **Date Charged to Loc.:** _____/_____

T **Information re most recent record in CofC database** (Check Current & History)

A **MRD:** _____/_____/_____ **Examiner** (LIE's initials): _____

P **Date Assigned:** _____/_____ **Turned In:** _____/_____

L **CofC Issued:** _____/_____ **CofC Denied:** _____/_____ **Updated:** Y / N **Date:** _____/_____

E **Patent number listed on C of C listing in OG** ((circle one) Y / N

   CofC Issued for this record is attached to patent on Internet (circle one) Y / N

H **New/different correction(s) requested.** Check Intranet or with RTIS. (circle one) Y / N

E ☐ Duplicate (same heading and corrections published/issued CofC on Intranet. (circle one) Y / N
R ☐ Substitute or corrected request. Locate the original request(check with JCWS and RTIS).
E ☐ Second Request (another) requesting new/different corrections or additional corrections.
↑ ☑ Status Ltr. and/or Outstanding Request

TEAM LEADER, DO NOT ORDER FILE. If necessary, call attorney/applicant for assistance in determining if new/different corrections. Team Leader, key new a record on: 2/3/05 .

Count with CofCs keyed rec'd same week, determine and note if **"P", "R", or "RTC".**

Mark through any corrections on 1050, that were appropriately published; or JCWS assign to: _____

☐ Reconsideration   ☐ Supersede   ☐ Special CofC   ☐ Erratum   ☐ Expedite CofC

Team Leader, determine if a Request for a Corrected CofC (Supersede) or Reconsideration, due to error in decisions or keying, attributable to (check the appropriate box, below):

☐ **RTIS**
Keying Error

☐ **LIE:** _____
LIE Processing or
Decision Error

☐ **OFFICE**
Error in Entry of Document
or Ex. Decision

☐ **ATTY.**
1.323 Consideration
or Petition Required

If errors are attributable to LIE, use guidelines for appropriately notifying the LIE and recording errors (make copies supporting that the LIE made error, attach copies to this cover sheet, keeping copies for your records, and forward copies to CBN, **at the end of each month**).

☐ JW or OL, locate request for CofC published on: _____/_____ and return to: _____
(Circle OAC Initials)

☑ Team Leader keyed record on on 2/3/05 _____ ☐ Post card Printed by Tasneem
(Team Leaders, give all second requests to Tasneem, to print a post card.)

☐ JCWS, order file, match paper (MRD) _____ and assign or reassign to LIE/to: _____/LIE, see your Team Leader for assistance.

Comments/ Instructions: _____